

Unmanned Aircraft Systems (UAS)

Issuing Experimental Certificates

Presented to: 2007 ICNS Conference Participants

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**Federal Aviation
Administration**



UAS Experimental Certificates

- **AIR-1/AFS-1 Agreed in April 2005 to accept applications for Experimental Certificates**
- **AVS-1 Decree → Do No Harm to NAS**
- **HQ Team established and led by AIR-200**
 - Team Members: Lead – Richard Posey, AIR-200
 - AIR-160, AFS-300, AFS-430, Air Traffic, Geographic MIDO and FSDO



UAS Experimental Certificates

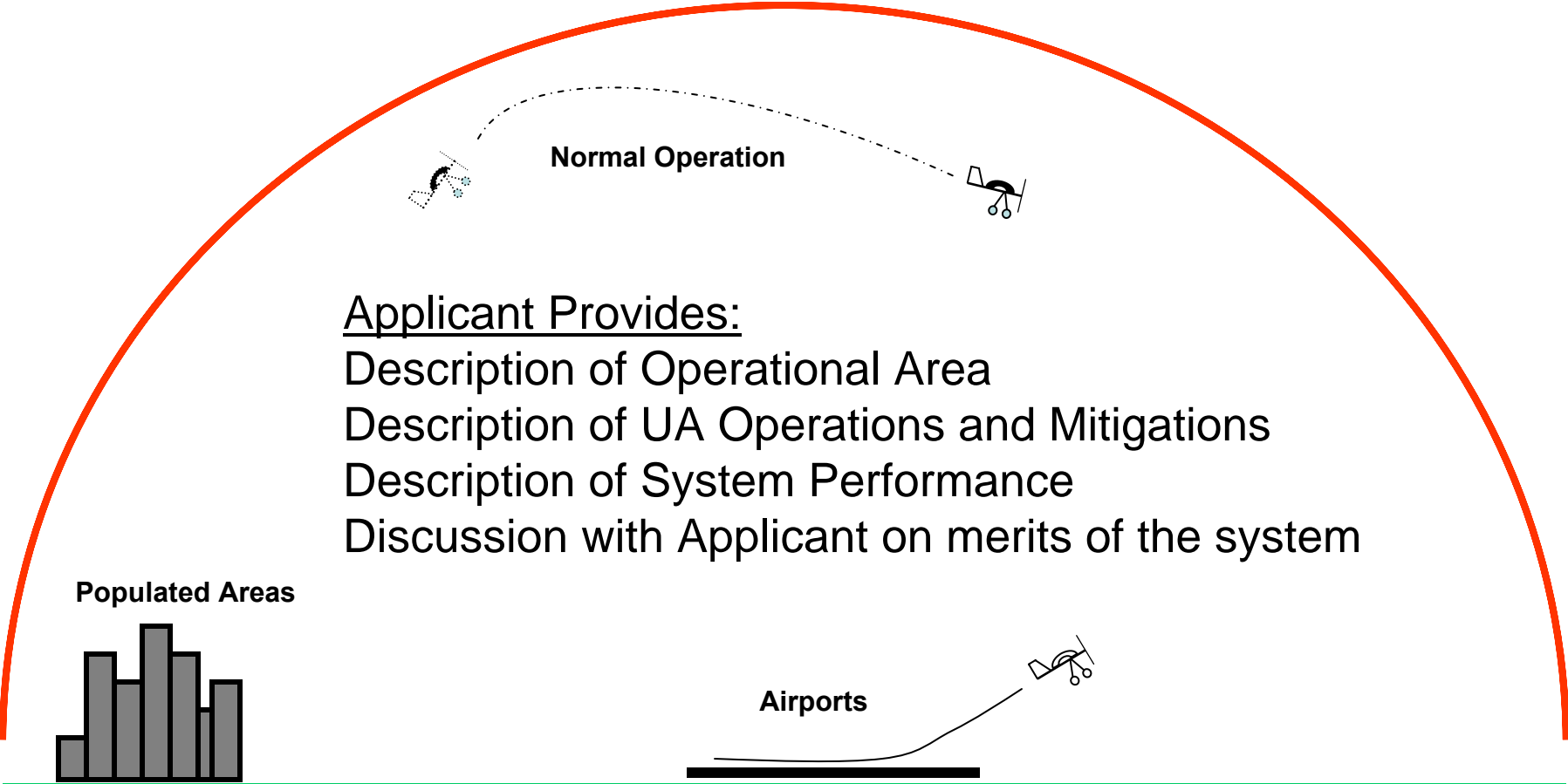
What guidelines are used?

- **Based on the procedures outlined in Order 8130.2, Chapter 4, Section 11**
 - Certification and Operation of Aircraft under the Experimental for the purposes of: Research and Development, Crew Training, and Demonstration
- **Modification of “Manned” process based on unique UAS considerations**

Issuing UAS Experimental Certificates

Current Procedures:

- Prospective applicant contacts AIR-200
- AIR-200 reviews applicants proposal
- If viable, sends applicant UAS specific Program Letter and Safety Checklist
- Program Letter and Safety Checklist reviewed by FAA SME – AIR-200, AIR-160, AFS430, ATO, MIDO, FSDO
- Safety evaluation at applicant's facility
- Review limitations, inspect aircraft and flight test area, potential flight demo, issue experimental certificate



Applicant Provides:

- Description of Operational Area
- Description of UA Operations and Mitigations
- Description of System Performance
- Discussion with Applicant on merits of the system

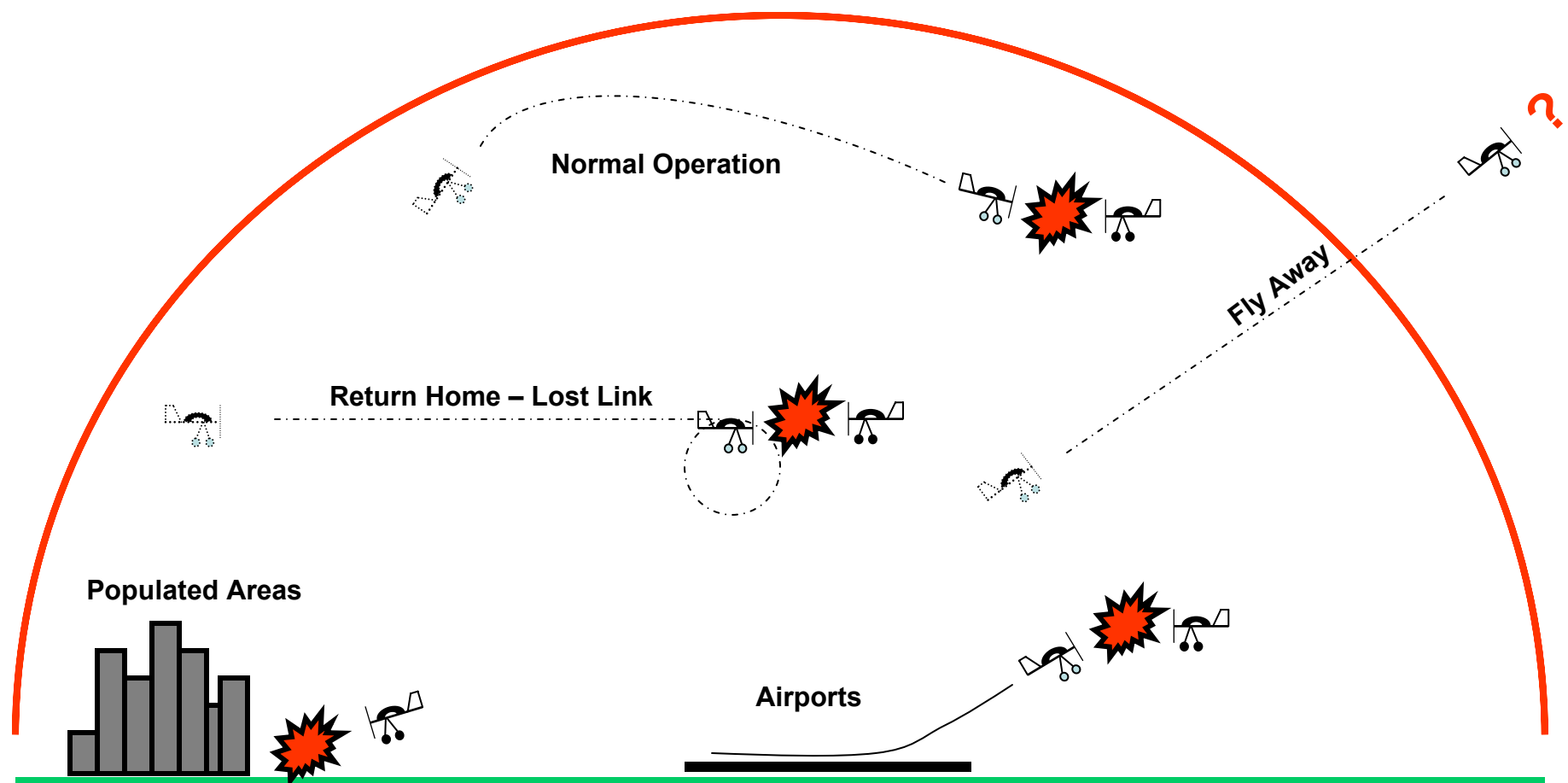
Applicant's Requested Operational Area

Risk to Public Safety

- Inability to avoid a collision
- Inability to maintain positive control
- Inability to meet operational environment's expected behavior
- Inability to safeguard the public

Mitigations

- Limit exposure time
- Limit exposure area
- Integrate “Independent Functionality”
- Inform and educate UAS Users as well as the Public



FAA Evaluation of System and Potential Risk to Public Safety

UAS Experimental Certificates

- **1 Experimental Certificate Issued in FY 2005**
- **3 Issued in FY 2006**
- **5 Issued in 07**
 - 2 Pending this month
 - 5 Safety Reviews scheduled
 - 20+ requests have been made for the Program Letter and Safety Checklist this year











UAS Experimental Certificates

- **UAS Information/Guidance for Applicants Posted on FAA Website in Feb 2006:**

www.faa.gov/uas

- **HQ Team to Retain Experimental Certificate Responsibility for the near future (several years)**
- **No Designee Participation at this Time**



Where are we going next?

- Developing internal FAA expertise – Beyond HQ
 - Supports eventual migration to the field
- Review existing 14CFR applicability and considering future approach for UAS
- Develop UAS specific policy
- Issue experimental cert Order in FY 2008 that includes specific guidance for UAS
- Continue to support UAS Standards development



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